



2012 Annual Report

TEXAS COASTAL MANAGEMENT PROGRAM



Coastal Coordination Advisory Committee

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The Honorable Jerry Patterson

Commissioner, Texas General Land Office

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Dude Payne, Brazoria County Commissioner

Local Business Representative

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Kelly Holligan, Water Quality Planning Division Director

Texas Sea Grant College Program

Pamela "Pam" Plotkin, Ph.D., Director

Texas Parks & Wildlife Commission

Ross Melinchuk, Natural Resources Deputy Executive Director

Coastal Coordination Act of 1991

It is declared to be the policy of this state to make more effective and efficient use of public funds and provide for more effective and efficient management of coastal natural resource areas, and to better serve the people of Texas by:

continually reviewing the principal coastal problems of state concern, coordinating the performance of government programs affecting coastal natural resource areas, and coordinating the measures required to resolve identified coastal problems; and

making all coastal management processes more visible, accessible, coherent, consistent, and accountable to the people of Texas.

(Texas Natural Resources Code §33.202(a))

Texas Coastal Management Program Goals

- to protect, preserve, restore, and enhance the diversity, quality, quantity, functions, and values of coastal natural resource areas;
- to ensure sound management of all coastal resources by allowing for compatible economic development and multiple human uses of the coastal zone;
- to minimize loss of human life and property due to the impairment and loss of protective features of coastal natural resource areas;
- to ensure and enhance planned public access to and enjoyment of the coastal zone in a manner that is compatible with private property rights and other uses of the coastal zone;
- to balance the benefits from economic development and multiple human uses of the coastal zone, the benefits from protecting, preserving, restoring, and enhancing coastal natural resource areas, the benefits from minimizing loss of human life and property, and the benefits from public access to and enjoyment of the coastal zone;
- to coordinate agency and subdivision decision-making affecting coastal natural resource areas by establishing clear, objective policies for the management of coastal natural resource areas;
- to make agency and subdivision decision-making affecting coastal natural resource areas efficient by identifying and addressing duplication and conflicts among local, state, and federal regulatory and other programs for the management of coastal natural resource areas;
- to make agency and subdivision decision-making affecting coastal natural resource areas more effective by employing the most comprehensive, accurate, and reliable information and scientific data available and by developing, distributing for public comment, and maintaining a coordinated, publicly accessible geographic information system of maps of the coastal zone and coastal natural resource areas at the earliest possible date;
- to make coastal management processes visible, coherent, accessible, and accountable to the people of Texas by providing for public participation in the ongoing development and implementation of the Texas CMP; and
- to educate the public about the principal coastal problems of state concern and technology available for the protection and improved management of coastal natural resource areas.



Texas Coastal Management Program





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List of Acronyms

ABNC
Armand Bayou Nature Center

BEG
The University of Texas
Bureau of Economic Geology

CBBF
Coastal Bend Bays Foundation

CCA
Coastal Coordination Act

CCAC
Coastal Coordination Advisory
Committee

CELCP
Coastal and Estuarine Land
Conservation Program

CIT
Coastal Issues Teams

CMP
Texas Coastal Management
Program

CMSP
Coastal and Marine Spatial
Planning

CNRAs
Coastal Natural Resource Areas

Corps
U.S. Army Corps of Engineers

Council
Coastal Coordination Council

CZMA
Coastal Zone Management Act

CZMP
Coastal Zone Management Program

CZMAPMS
Coastal Zone Management Act
Performance Measurement System

FY
Fiscal Year

GBF
Galveston Bay Foundation

GLO
Texas General Land Office

JPAF
Joint Permit Application Form

Land Commissioner
Texas Land Commissioner

NDZ
No Discharge Zone

NERRS
National Estuarine Research
Reserve System

NOAA
National Oceanic and Atmospheric
Administration

NPS
Nonpoint Source

OBA
Texas Open Beaches Act

OCRM
Office of Ocean and Coastal
Resource Management

OSSFs
Onsite Sewage Facilities

PAG
Permitting Assistance Group

PCBs
Polychlorinated Biphenyls

PSC
Permit Service Center

PSM
Projects of Special Merit

SAC
Texas Sunset Advisory Commission

SSCN
Spanish & Science Club Network

TAC
Technical Advisory Committee

TAMUCC
Texas A&M University
-Corpus Christi

TCEQ
Texas Commission on
Environmental Quality

TSSWCB
Texas State Soil and Water
Conservation Board

USFWS
U.S. Fish and Wildlife Service



The Texas Coastal Management Program (CMP) was finalized in 1997 and accepted into the Coastal Zone Management Program (CZMP) by the National Oceanic and Atmospheric Administration (NOAA) after the Texas Legislature passed the Coastal Coordination Act (CCA) in 1991. Concerns raised by Texas coastal citizens regarding the need for a unified and comprehensive approach to the management of coastal natural resources and other complex coastal issues spurred the passage of this act to address the concerns and better manage coastal issues. The CCA called for the development of a comprehensive coastal program based on

previously existing statutes and regulations and directed the Texas General Land Office (GLO) to develop a long-range, comprehensive plan for managing the Texas coast.

The CCA set the boundaries of the state's coastal zone to include all or part of 18 coastal counties and more than 8 million acres of land and water; established the framework for a federally approved coastal management program; and created the Coastal Coordination Council (Council) to establish rules for certification for consistency with the goals and policies of the CMP, and to approve CMP-funded projects.



The CMP's mission is to improve the management of the state's coastal natural resource areas (CNRAs)—areas designated by the Council to be of particular concern to the state—and ensure the long-term ecological and economic productivity of the Texas coast. To ensure sound decision-making, the Council adopted uniform goals and policies for all entities regulating or managing natural resource use on the coast. As required by §33.204(f) of the CCA, the GLO, in conjunction with the CMP's networked agencies and subdivisions, must prepare an annual report on the effectiveness of the CMP. This report covers FY 2012, which runs from September 1, 2011, through August 31, 2012, and includes CMP highlights and key activities. During Fiscal Year (FY) 2011 and FY 2012, two events significantly

impacted the CMP. One was the Texas Sunset Advisory Commission (SAC)'s review of the Council, the other was a lawsuit.

In 2010, the Council underwent review by the SAC. In response, the 82nd Texas Legislature passed and the Governor signed into law a bill implementing the SAC's recommendation to abolish the Council and transfer duties to the Texas Land Commissioner (Land Commissioner). The Land Commissioner is now authorized to make consistency determinations as required by federal law.

The bill also required the Land Commissioner to establish a Coastal Coordination Advisory Committee (CCAC) and evaluate the functions and membership of the Permitting Assistance Group (PAG) by January 1, 2012. The CCAC was established with representatives from the networked agencies and public members appointed by the Land Commissioner. The terms of office for the CCAC members align with the Coastal Zone Management Act (CZMA) Section 309 five-year assessment of the CMP, with a shorter initial term (2011-2015). The CCAC members will hold conferences and meet in person as needed. In addition to the CCAC, Coastal Issue Teams (CIT) have been organized to increase interagency coordination and communication among staff members. The Issue Teams will work with the following: 1) water quality, 2) CMP grants, 3) CMP coastal long-term planning, 4) regulatory/permitting and 5) the PAG. The CCAC will handle elevated coastal and consistency issues that arise through the CIT. Coastal staff members have been working closely with the Harte Research Institute to incorporate these

updates into the Texas Administrative Code and will be going out for public comment in early spring 2013.

During FY 2011, the *Severance v. Patterson* lawsuit (see Appendix C for more information) presented a major challenge to the Texas coast. Carol Severance, a California resident who owned front-row properties in Galveston, in conjunction with the Pacific Legal Foundation, filed a federal lawsuit claiming the Texas Open Beaches Act (OBA) violated her constitutional rights by creating an unreasonable seizure of her property and a governmental taking without just compensation.

Under the OBA the dry beach is typically subject to an easement that gives the public the right to access and use the beach. In early 2012, the Texas Supreme Court held that public beach access easements "roll" landward with gradual and imperceptible erosion of the shoreline. However, the court also held that public easements do not automatically roll inland as the result of an "avulsive" event, such as a hurricane, that "suddenly and dramatically" pushes the line of vegetation landward.

The Fifth Circuit affirmed the federal district court's dismissal of Severance's unconstitutional takings claim for lack of ripeness. On the other hand, the Fifth Circuit stated that Severance had a potential "unreasonable seizure" claim in light of the Texas Supreme Court's decision. Accordingly, the Fifth Circuit has remanded the case to federal district court for further proceedings in connection with Severance's Fourth Amendment Claim. The district court has not yet entered a scheduling order.



Each year, the GLO receives approximately \$2.5 million under the CZMA to implement the state's coastal program. The CZMA provides funding for three programs: the coastal resource improvement program (\$306/\$306A), program enhancement (\$309), and the state's coastal nonpoint source pollution (NPS) control program (\$310).

For FY 2012, NOAA granted the state \$2,475,000 in funding to administer the CMP: \$1,992,000 for the coastal resource improvement program (\$306/\$306A), \$483,000 for the program enhancement program (\$309) and \$180,643 for projects of special merit (PSM). The state is required to match the \$306/\$306A funds at a 1:1 ratio, however, a match is not required

for \$309 or PSM program enhancement funding.

The state awards approximately 90 percent (\$1,732,000) of its \$306/\$306A funding to eligible entities for coastal projects through a competitive grant process. Grant subrecipients are required to match 50 percent of the \$1.73 million; however, the state provides 10 percent of that match to lower the subrecipient match to 40 percent. The state retains approximately 10 percent for program administration, matching this amount with salaries, fringe benefits, and indirect costs.

The following is a breakdown of the \$306/\$306A, \$309 and PSM budgets:

\$306/\$306A	State	Subrecipients	Total
Federal Amount Awarded	\$260,000.00	\$1,732,000.00	\$1,992,000.00
State/Subrecipient Match	\$ 817,593.00	\$1,174,407.00	\$1,992,000.00
Subtotal	\$1,077,593.00	\$2,906,407.00	\$3,984,000.00
\$309	State	Subrecipients	Total
Federal Amount Awarded	\$.00	\$483,000.00	\$483,000.00
PSM	State	Subrecipients	Total
Federal Amount Awarded	\$.00	\$180,643.00	\$180,643.00

Program Overview

Federal Consistency Review

Approval of the CMP gave Texas the authority to review proposed federal actions and activities that are located in or may affect land and water resources in the Texas coastal zone. This process, called federal consistency review, allows the state to review:

- projects requiring a federal license or permit,
 - direct activities proposed by federal agencies, and
 - federal financial assistance to state and local governments.
- Hard substrate reefs
 - Coastal barriers
 - Coastal shore areas
 - Gulf beaches
 - Critical dune areas
 - Special hazard areas
 - Critical erosion areas
 - Coastal historic areas
 - Coastal preserves

This review ensures the state's interest is fairly represented and allows the state the opportunity to provide input into policies, procedures, or actions and activities that may affect the management of coastal areas.

These actions and activities are evaluated for potential impacts to CNRAs and must comply with the goals and policies of the program. The following 16 CNRAs have been identified under the program:

- Waters of the open Gulf of Mexico
- Waters under tidal influence
- Submerged lands
- Coastal wetlands
- Submerged aquatic vegetation
- Tidal sand and mud flats
- Oyster reefs

Federal actions are federal licenses or permits issued by a federal agency that governs land or water uses in the coastal zone. For example, a U.S. Army Corps of Engineers (Corps) permit for pier or boat dock construction is considered a federal action. During Federal FY 2012, which runs from October 2011 - September 2012, a total of 241 actions requiring a federal license or permit were reviewed.

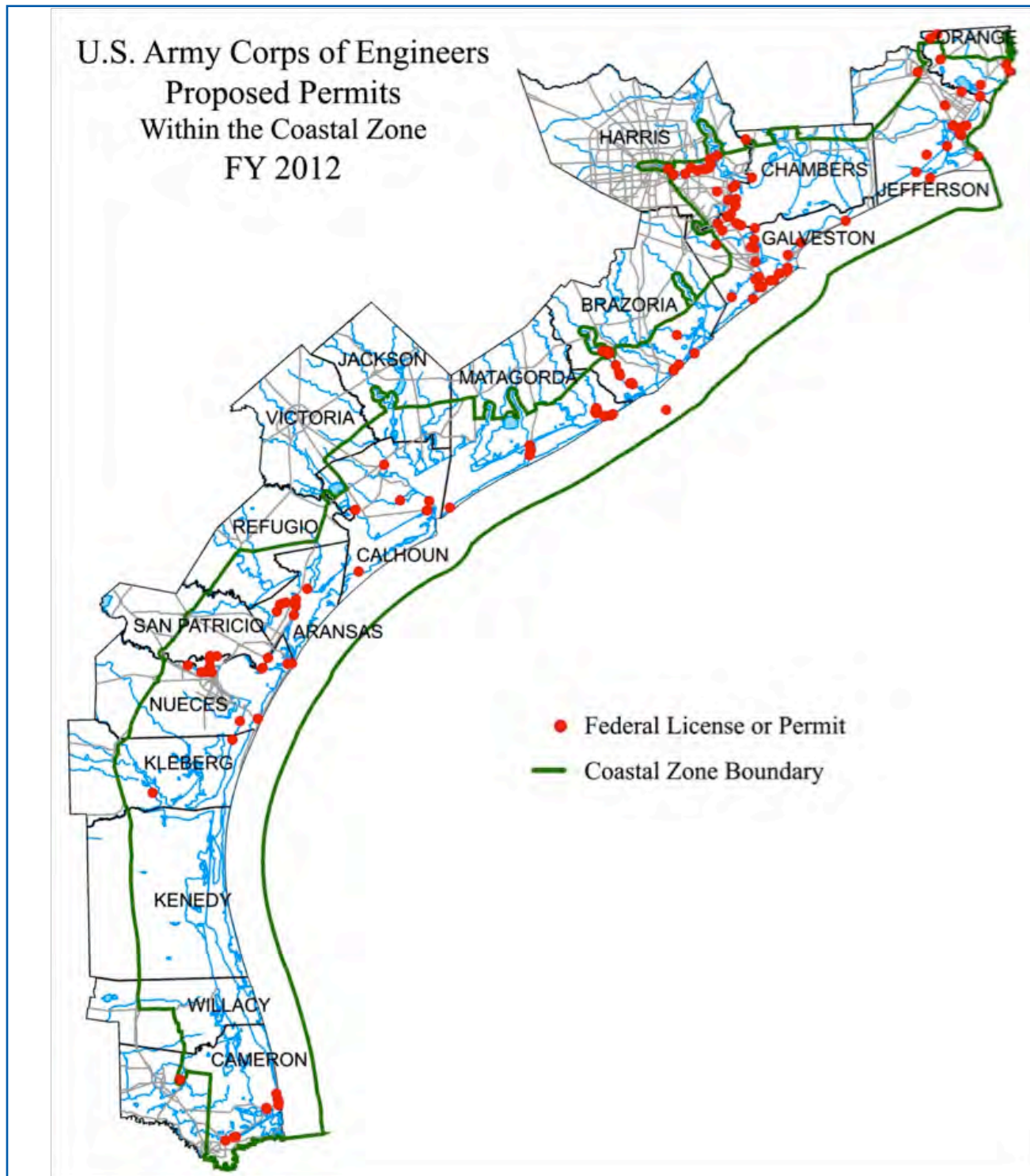
Federal activities are those performed by or for a federal agency in response to its statutory responsibility. For example, maintenance dredging of a navigation channel or changes in federal permitting processes are considered federal activities. During Federal FY 2012, five federal activities were reviewed for consistency.

Financial assistance projects include state or local applications for federal funding. For example, a request for funding for a flood control project is considered

a request for financial assistance. During Federal FY 2012, 138 financial assistance projects were reviewed.

All of the proposed federal agency actions, activities, or financial assistance projects reviewed by the staff and considered by the Land Commissioner were deemed

consistent with CMP goals and policies. The public is encouraged to participate in the consistency review process using the Texas Register notification system and through the GLO's Internet site at <http://www.glo.texas.gov/GLO/public-notice/index.html>.



State Consistency Review

The CCA requires the rules and actions of the networked state agencies to be consistent with the program's goals and policies. Each networked agency is responsible for ensuring its actions are consistent with the CMP. Networked agencies are those with activities or rules that affect or protect CNRAs. The affected state agencies include the School Land Board, the Boards for Lease of State-owned Lands, the Public Utility Commission of Texas, the Texas Historical Commission, the Texas State Soil and Water Conservation Board (TSSWCB), the Railroad Commission, the GLO, the Texas Commission on Environmental Quality (TCEQ), the Texas Department of Transportation, and the Texas Parks and Wildlife Department. Certification of an agency's rules is the primary tool for ensuring a networked agency's rules governing actions subject to the CMP are consistent with the program. Once an agency's rules are certified, the agency can adopt consistency review thresholds limiting the CMP's authority to review its actions. The agencies are responsible for enforcing the provisions of the CMP. All agencies are authorized to enforce the permits or authorizations they issue.

During FY 2012, the GLO received quarterly reports from the networked state agencies for permitting actions, rulemakings, and enforcement actions. The reporting state agencies received 3,661 permitting applications of which 2,301 were approved without conditions, and 413 were approved with conditions. The state agencies submitted and adopted 47 rulemakings. In addition, the state agencies reported undertaking 693 enforcement actions.

Permit Service Center

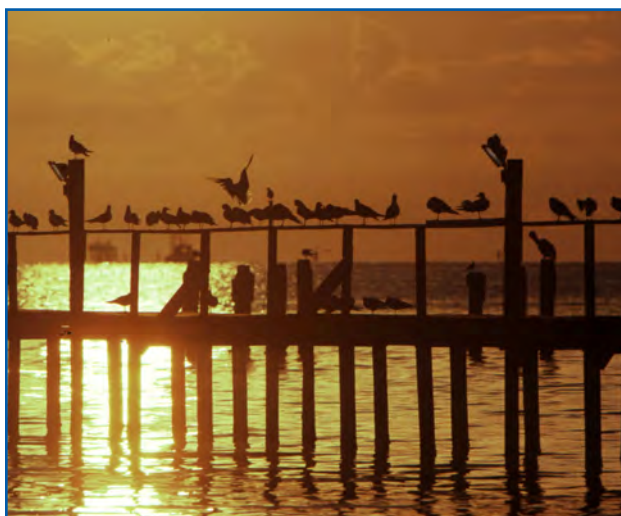
The Permit Service Center (PSC) assists applicants in submitting administratively complete applications and improves the efficiency of the permit process by troubleshooting applications before submission to the regulatory agencies. This has allowed permitting authorities to reduce processing time and ensure efficient

review of permits.

The PSCs met the FY 2012 Legislative Budget Board target of 110 Joint Permit Application Forms (JPAFs). The number of JPAFs can be attributed to the continuation and expansion of the Structure Registration/General Permit (SP/GP) agreement between the Corps Regulatory Branch and the GLO's Professional Services Division.

Analysis of Permit Application Reviews

Overlapping jurisdiction between the Corps and state agencies resulted in redundancies that created a complicated application process for common projects, such as residential piers or placement of fill material to construct a building. To mediate the problem, JPAFs were



created to obtain permits/authorizations from multiple agencies. JPAFs reduce confusion among applicants regarding what permits are necessary for their project, speed the permitting process by serving as a clearing-house for coastal permitting activities, and simplify the process by providing a completed, consolidated permit application to be simultaneously distributed to the authorizing agencies. During the FY 2012 reporting period, the PSC assisted 211 applicants. The Corpus Christi office processed 60 JPAFs and the Galveston office processed 91 JPAFs. The processing time per application averaged 3.5 days and included logging information, reviewing the application for completeness, and forwarding it to the appropriate state/federal agency for formal permit evaluation.

Permitting Assistance Group

The PAG was formed to identify and address permitting obstacles; encourage interagency cooperation; offer the public a one-stop-shop for project-specific advice while navigating the permit application process; and serve as a liaison to the CACC on permitting issues. The PAG is comprised of CACC members and representatives of federal and state agencies that participate in the permitting process as applicants, permitting entities, or commenters.

FY 2011 and 2012 JPAFs Received (by Quarter)		
Quarter	FY2011	FY2012
1	23	35
2	36	33
3	52	36
4	38	47
Total	149	151

Following the SAC's recommendation to abolish the Council and transfer its functions to the Land Commissioner, the regulatory and permitting CIT met on October 28, 2011 and deemed that no changes to the PAG should be made and that the PAG's non-statutory function, regulatory streamlining, should be accomplished without a statutorily mandated group designated to do so.

The PSC has two locations:

Permit Service Center (Upper Coast)

Texas A&M University-Galveston

MERC Bldg., 3027

Suite 126

P.O. Box 1675

Galveston, TX 77553-1657

Toll-free: 866.894.7664

Phone: 409.741.4057

Fax: 409.741.4010

Permit Service Center (Lower Coast)

Texas A&M University-Corpus Christi

6300 Ocean Drive, TAMU-CC

Carlos F. Truan Natural Resources Center

Suite 2800

Corpus Christi, TX 78412-5841

Toll-free: 866.894.3578

Phone: 361.825.3050

Fax: 361.825.3465

permitting.assistance@glo.texas.gov
glo.texas.gov

Texas Coastal Nonpoint Source Pollution Control Program

As a requirement for federal approval of its CMP, Texas developed and implemented a program to identify sources of coastal NPS pollution and develop recommendations for its prevention.

The Texas Coastal NPS Pollution Program was conditionally approved on July 9, 2003. However, NOAA identified five management areas Texas must strengthen or correct prior to receiving full approval. These areas are:

1. new development and site development;
2. watershed protection and existing development;
3. new and operating onsite disposal systems;
4. roads, highways, and bridges; and
5. hydromodification.

The hydromodification condition was lifted with the development of a Hydromodification Manual. The GLO, TCEQ, and TSSWCB have submitted documents outlining programs that are currently in place and new programs that will satisfy the remaining conditions. The TSSWCB and TCEQ are working to address the first three remaining conditions. The GLO staff is working to address the fourth condition. In FY 2012, the TCEQ and GLO submitted a measure to NOAA to approve new and operating onsite disposal systems. Approval is currently pending.



Texas Coastal and Estuarine Land Conservation Program

Through the adoption of the Appropriations Act of 2002 (Public Law 107-77), Congress directed the Secretary of Commerce to establish a Coastal and Estuarine Land Conservation Program (CELCP) “for the purpose of protecting important coastal and estuarine areas that have significant conservation, recreation, ecological, historical, or aesthetic values, or are threatened by conversion from their natural or recreational state to other uses,” giving priority to lands that can be effectively managed and protected and have significant ecological value.

In establishing the CELCP, Congress: 1) directed the Secretary of Commerce to develop guidelines delineating necessary criteria for grant awards; 2) required the governor of each coastal state to designate a lead agency to administer the state CELCP, if a state’s lead agency for its coastal management program does not assume the role; and 3) required a 1:1 match from non-federal funding sources for financial assistance awarded under the program.

In June 2003, the Office of Coastal and Resource Management (OCRM) at NOAA issued guidelines for states to follow in developing state CELCP plans. These guidelines required the states to submit a state CELCP plan, establish a process for identifying and ranking qualified projects within the state, and nominate projects to an annual national competitive selection process. The Texas CELCP was approved in 2010.

No federal CELCP funding was available during FY 2012.

Coastal Zone Management Act Performance Measurement System

NOAA uses performance measures to assess how well the CZMP and National Estuarine Research Reserve System (NERRS) are achieving the goals of the CZMA.

NOAA has used expert panels, collaborative work groups, and studies involving coastal management programs and reserves to develop performance measures that accommodate varying management structures and differing coastal priorities across coastal states. Performance measures include the following components:

1. Performance Indicators,
2. Units of Measure, and
3. Baseline Information.

Long-term monitoring and data collection of performance measures establish a baseline and identify trends in coastal resource management outcomes. With appropriate support, performance measures become a powerful tool for managing the nation's coastal zone and for demonstrating the CZMA's success in preserving, protecting, and restoring coastal resources and sustaining coastal communities throughout the United States for this and future generations.

The Coastal Zone Management Act Performance Measurement System (CZMAPMS) tracks national indicators of the effectiveness of CMP and NERRS in achieving CZMA and strategic objectives. The system consists of contextual indicators to provide information on environmental and socioeconomic factors influencing program actions and performance measures to assess how well states are achieving CZMA program objectives.

OCRM collaborated with coastal management programs and reserves to develop a performance measurement system that provides flexibility and accommodates varying management structures and differing coastal priorities across coastal states.

Quantification of management outcomes directly responds to congressional requests for performance measures to assess the national impact of CZMA programs and to the Office of Management and Budget's recommendations that CZMA programs develop out-

come-oriented performance measures to demonstrate program effectiveness. The CZMAPMS facilitates adaptive management, enhanced communication, and informed planning and resource allocation decisions by federal and state coastal managers.

National Coastal Zone Management Program Performance Measures

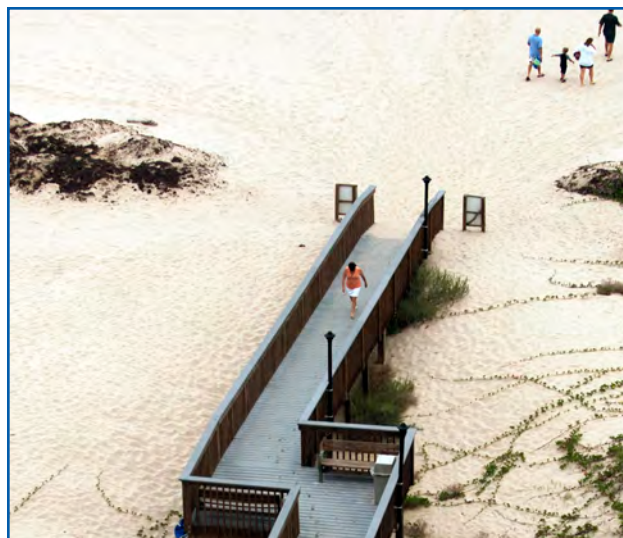
The CZMP has five categories of performance measures:

1. **Government Coordination and Decision-Making.** The goal of this measure is to improve coordination and participation in the implementation of the CZMP and improve government decision-making through technical assistance and consultation on projects affecting the coastal zone. The CZMP provides a framework under the CZMA federal consistency provisions to effect change through state policies in support of national priorities, provide technical assistance and dedicated staff resources in the review of coastal zone projects, and achieve regulatory efficiencies through a coordinated, predictable project approval process. The CZMP balances the need for economic development with resource protection through implementation of state regulatory programs to avoid, minimize, and if necessary, mitigate the loss of coastal habitats. The CZMP is a federal-state partnership that supports comprehensive planning, coordinated decision-making, and public participation in coastal management.
2. **Public Access.** The goal of this measure is to create and enhance public access sites over the next five years. The CZMP protects, creates, and enhances public access to the coast through regulatory programs, acquires new public access sites, and enhances recreational facilities such as boardwalks and piers.

3. **Coastal Habitats.** The goal of this measure is to protect coastal habitat through acquisition or easement, restore coastal habitat, and remove marine debris from coastal habitats. The CZMP uses funding and expertise to protect and restore coastal habitat and develops and coordinates local partnerships to engage citizen stewards. The CZMP works with local communities to reduce marine debris reaching our oceans, Great Lakes, and beaches.
4. **Coastal Hazards.** The goal of this measure is to increase the percentage of coastal communities implementing management practices to improve resiliency and increase public awareness of hazards. Through its partnerships, the CZMP encourages states and communities to become more resilient through comprehensive planning, managing development to minimize damage to communities and coastal habitats, increasing preparedness, and responding to coastal hazards.
5. **Coastal Dependent Uses and Community Development.** The goal of this measure is to increase the percentage of coastal zone communities implementing sustainable coastal management practices and revitalizing port and waterfront areas. The CZMP gives funding and expertise to help coastal communities sustain their economies, human health, environment, and coastal character.

Implementation of the performance measures is conducted collaboratively with the 33 state and territory coastal management programs. A three-year phased approach completed in 2008 resulted in a core set of measures representing shared national priorities with feasible and consistent reporting standards.

The CZMP is also developing approaches to commu-



nicate the results of the performance measures and nationally collected contextual indicators. Recommendations for communicating the results were developed by a group of representatives from the Coastal States Organization, coastal management programs, and OCRM.

The information is reported to OCRM annually for performance measures and every five years for contextual indicators. Contextual indicators are submitted as part of the program's \$309 Assessment and Strategy Report, which is described in detail later in this report.

Texas National Coastal Zone Management Program Performance Measures

At the state level, the performance measure data is used for CMP goals and programmatic strategies, including the CMP Grants Program. Texas Performance Measures reported to OCRM are included in Appendix A and represent the data from projects completed during the Federal FY 2012 and reported to OCRM in October 2012.

Program Changes

Title 15 Code of Federal Regulations Part 923 requires states with federally approved coastal management programs to report amendments to their enforceable policies. The staff worked with OCRM to develop a

reporting system that focuses on the core statutes and administrative rules that comprise the state program and significantly reduces the demands on both Texas and OCRM staff while ensuring compliance with federal program requirements. The draft submission covers program changes from January 1, 1997 through December 31, 2011, and is currently under review with OCRM. Once approved, the final submission process will begin.

Education and Outreach

Education and outreach efforts achieved through CMP-funded projects are particularly important along our Texas coast and within the coastal community. Education and outreach projects funded under the CMP included:

Boater Waste Education Campaign

In 2008, the Galveston Bay Foundation (GBF) launched the Boater Waste Education Campaign to address illegal discharges through targeted outreach and education to boaters. This project focuses on the Clear Lake, Texas boating and marina community, but is applicable to Galveston Bay users as a whole. The purpose of the campaign is to decrease the incidences of illegal boater sewage waste discharge in the Galveston Bay Estuary, particularly Clear Lake since it has the third highest concentration of privately owned marinas in the United States. The project has involved the development of social marketing messages, including personal communications through presentations and exhibits, print, billboard and Internet use. The campaign emphasizes environmental harm caused by raw sewage and methods for properly disposing of boater waste. The GBF oversees the development and distribution of the message with the advice of a workgroup of stakeholders from the Galveston Bay Estuary Program, TCEQ, Clean Texas Marina Program, Clear Lake Marina Association and other environmental nonprofit organizations. Through project expansions, the GBF has developed partnerships with marinas to implement personal-

ized outreach and management strategies that fit their unique needs, including assistance applying for pump-out station funding. The GBF also established a network of volunteer water quality monitors (primarily boaters sampling at marinas and popular recreational areas) through the Texas Stream Team program to measure positive environmental impacts from best management practices implemented. The GBF has also worked with enforcement agencies to develop and facilitate no discharge zone (NDZ) enforcement training sessions and sought out stakeholder support and funding to install city-owned, public pump-out stations in key locations.

In addition to the data collected from water quality monitoring, a volunteer Dock Walker program is being implemented to survey boater knowledge and behavior change throughout the campaign. Past efforts of mailing surveys showed limited response, thus energy was shifted to the Dock Walker's face-to-face approach. Boaters and marinas have been and will continue to be encouraged to join the Clean Texas Marina and Clean Boater Programs.

The Only Barriers Along the Texas Coast are Islands

The Gulf of Mexico Foundation, through its Science & Spanish Club Network (SSCN), continued to build upon previously CMP-funded projects within four major critical habitats along the Texas coast: Bahia Grande, Redfish Bay, Aransas National Wildlife Refuge/Matagorda Island and Matagorda Bay. This project built upon the successes of past and present collaborations with a mix of working partnerships that strengthen the SSCN's sense of confidence in conducting educational activities for coastal Texas. Tasks completed for this project included: conducting shoreline cleanups on Matagorda Island; creating a Whooping Crane curriculum to educate elementary students of the importance of the Whooping Crane's habitat; establishing an ecosystem-based partnership of the four coastal municipalities (Los Fresnos, Laguna Vista, Port Isabel, and

South Padre Island) in closest proximity to the Bahia Grande restoration project to continue SSCN's cleanup and public education and outreach efforts; and participating in the SSCN's 7th Annual Gulf of Mexico Youth Leadership in Stewardship Conference on current coastal issues.

Texas High School Coastal Monitoring Program

The Texas High School Coastal Monitoring Program encourages high school students, teachers, and scientists to work together to gain a better understanding of dune and beach dynamics on the Texas coast. Scientists from the University of Texas at Austin provide the tools and training needed for scientific investigation. Students and teachers learn how to measure the topography, map the vegetation line and shoreline, and observe weather and wave conditions. By participating in an actual research project, the students obtain an enhanced science education. Furthermore, public awareness of coastal processes and the CMP is heightened, and the students' efforts provide coastal communities with valuable data on their changing shoreline.

Rain Gardens: Mitigating Runoff Pollution for Coastal Texas

Contaminated urban runoff is a major source of pollution in Texas coastal bays and bayous. Residential and

commercial landscapes are a principal component of that pollution. Rain gardens, also known as bioretention cells, are emerging as an effective and aesthetic way to minimize contaminated urban runoff. The WaterSmart Program of the Texas AgriLife Extension Service, part of the Texas A&M University System, created an education and outreach initiative to install three demonstration rain gardens in areas of high visibility. These rain gardens are easily accessible public displays that clearly show the environmental and aesthetic benefits rain gardens provide by filtering contaminated urban runoff at the source. In addition, a Rain Garden Manual was published to target residential and commercial entities and demonstrate how to create a rain garden.

Volunteer Marsh Planting and Restoration Project

The Coastal Bend Bays Foundation (CBBF) developed a network of approximately 200 individuals to mobilize for volunteer marsh planting restorations. In its 18 years as a §501(c)3 non-profit organization, the CBBF has a history of developing and leading conservation efforts. Through resource agency partnerships, CBBF developed the volunteer planting core group to provide professional training on proper methods for propagating marsh plants and participated in several different events that planted thousands of marsh plants in the Texas Coastal Bend.

Prairie Rising: A Grassroots Restoration Partnership

The Armand Bayou Nature Center (ABNC) is a 2,500-acre nonprofit wildlife preserve in southeast Harris County. ABNC manages one of the largest holdings (900 acres) of endangered coastal tallgrass prairie habitat in the Galveston Bay area. These grasslands are considered critically imperiled with an estimated 1 percent of the original range remaining. The ABNC prairies are characterized as coastal wetlands and are designated as CNRAs. Coastal prairies provide a public benefit through a number of valuable ecosystem services, such



as flood mitigation, water and air quality improvement, wildlife habitat, and recreation. ABNC has a lengthy history of restoring coastal prairie. Since 1979, a team of staff biologists and dedicated volunteers has implemented an integrated management strategy, which includes prescribed burning, mowing, invasive species control, native plant cultivation, and installation, vegetation monitoring, and prairie education. ABNC is able to manage this coastal natural resource through high school student volunteers participating in service learning projects. During service learning projects native tall grass prairie species are propagated in ABNC's nursery and planted in the ABNC prairie at volunteer planting events. To further public knowledge of this critical habitat, ABNC published a Prairie Study Guide to educate Texans on the significance of this essential coastal habitat.

Training Program for Certifying Nesting Sea Turtle Monitors

Dr. Andre Landry, a recently retired professor at Texas A&M Galveston, lead training to certify turtle nesting monitors. Storm events and coastal erosion have increasingly threatened the integrity of Texas beaches. As a result, agencies, such as the Corps and GLO, have partnered with coastal communities to conduct shoreline stabilization projects involving beach nourishment. Projects conducted during sea turtle nesting season, which runs from April 1 to October 1, may det-



rimentially impact nesting sea turtles. To ensure consistency with the Endangered Species Act, agencies are required to enter into a Section 7 Consultation with the U.S. Fish and Wildlife Service (USFWS). Although on-beach project activities may be scheduled before or after nesting season, this is often overruled by the need to protect an eroded shoreline prior to hurricane season, availability of equipment (i.e., dredges) and/or qualified contractors, and other cost-saving reasons.

Projects that require a USFWS consultation must implement monitoring to ensure project activities pose no threat to nesting activity. Often, projects are delayed at substantial cost due to lack of available training programs and/or individuals equipped with endangered species permits; hands-on experience with sea turtle nesting activity; and resources needed to train monitors. The trainings conducted as a part of this project fill a critical void in the GLO's ability to maintain the integrity of 33 engineered beaches from McFaddin Refuge to South Padre Island, where Kemp's ridleys have exhibited record increases in nesting since 2002.

Harris County Seafood Consumption Advisory Public Education Campaign

The Harris County Seafood Consumption Advisory Public Education Campaign educated the public on the risks of consuming seafood contaminated with toxic substances. The project was conducted within Harris County, with a focus on low income areas and areas with a high concentration of immigrants in the eastern part of the county.

Over the last 20 years, areas along the shorelines of the Houston Ship Channel and contiguous waters, such as Buffalo Bayou, the lower San Jacinto River, and Upper Galveston Bay, have been significantly impacted by seafood consumption advisories. The GBF installed signs at the following locations advising adults to limit consumption of the following species to 8 ounces per month and further advising no consumption for women

who are nursing, pregnant, or may become pregnant and children under 12 years old: (1) San Jacinto River downstream of Highway 90 and Upper Galveston Bay for blue crabs due to presence of dioxin in tissue; (2) upstream of Lynchburg Ferry and the San Jacinto River downstream of Highway 90 bridge for all species of fish due to the presence of dioxin, organochlorine pesticides, and polychlorinated biphenyls (PCBs); and (3) Galveston Bay for all species of catfish and speckled trout due to the presence of dioxin and PCBs.

These communities may not be reached effectively by traditional public education campaigns. GBF targeted the entire community by installing English and Spanish signage and making presentations in high-use areas of the bay where dioxin, PCBs, and other contaminants are of particular concern.

General Land Office Texas Coastal Expo 2012

The Texas Coastal Expo returned to Galveston's Moody Gardens on June 9, 2012 for another day of fun and learning. A free-to-the-public event, the Expo serves to educate coastal residents and visitors on the recreational and economic benefits of the Texas coast to protect and conserve this valuable natural resource.



Attendees made their way to the Moody Gardens Oleander Bowl where they experienced touch tanks with aquatic life, a sand sculpture demonstration, a surfing simulator and a 25-foot Coast Guard Response Boat. The Expo also featured bay cruises on the Texas A&M research vessel *Earl Milan*. Participants boarded the boat for an hour-long trawl cruise that concluded with an examination of marine life found in the trawl net. GLO exhibits included Beach Watch and Adopt-A-Beach displays, an Oil Spill Prevention and Response Program airboat and the always popular fish printing booth.

General Land Office Educational Information

The staff distributed a total of 3,797 TCMP publications in response to requests from the public, including 121 copies of the Beach and Bay Access Guide to coastal marinas and chambers of commerce along the Texas coast.

The Texas Coastal Connection website (www.TexasCoastalConnection.com) contains information related to coastal topics, the GLO's Adopt-A-Beach, and other informational links and staff contacts.

A variety of publications, packets, and brochures is available free of charge on the GLO website at glo.texas.gov. A list of available publications is included in Appendix B.

Projects of Special Merit (PSM)

NOAA established the PSM competition to allow coastal states to apply for funding to continually improve their programs in specified areas of national importance. The intent of PSM funding is to offer states with approved coastal management programs the opportunity to develop innovative projects that further their approved enhancement area strategies and focus on the following national enhancement area priorities: Wetlands, Hazards, Cumulative and Secondary Im-

pacts, and Ocean and Great Lakes Resources.

In FY 2012, the GLO submitted and received approval of the following project:

Galveston Bay Wetland Mitigation Assessment and Local Government Capacity Building

The Houston Advanced Research Center will examine the long-term status of wetland permit and mitigation activities in the Lower Galveston Bay watershed and

bridge the gap between local residential and commercial development, land use permitting decisions of local governments, the federal wetland permitting process, and regional habitat conservation goals.

PSM Funded: \$180,643

Total Project: \$180,643

Contact: Lisa A. Gonzalez
4800 Research Forest Drive
The Woodlands, TX 77381
281.364.6044



Grants Program

Section 306/306A Grants

In FY 2012, under Grant Cycle 17, Land Commissioner Jerry Patterson authorized funding for 21 projects totaling \$1,732,000. These projects included eight coastal natural hazards response projects, five critical areas enhancement projects, four water quality projects, one waterfront revitalization and ecotourism development project, and two public access projects.

Under Grant Cycle 17, applicants were allowed to continue to submit individual large-scale projects up to \$400,000 for funding consideration. The types of projects eligible for this funding included:

- habitat protection/restoration/acquisition projects; and
- land acquisition projects that increase public access to coastal bays or gulf beaches and other resources.

Commissioner Patterson selected only one large-scale project this funding cycle. The project is Derry Waterfront Park Living Shoreline (\$219,715).

Cycle 17 2012 \$306/306A Grant Awards

Brazoria County

San Luis Pass County Park Dune Walkover

The Brazoria County Parks Department will construct a

boardwalk, a 10-foot by 10-foot observation deck and dune walkover to provide ADA-compliant and safe access from the visitor center.

CMP Funded: **\$34,995**

Match: **\$23,971**

Total Project: **\$58,966**

Contact: **Ms. Lydia Garcia**

313 W. Mulberry
Angleton, Texas 77515
979.-864.1541 Ext. 5

Cameron County

Arroyo Colorado Assessment of Tidal Stream Communities

Texas AgriLife Research will apply tidal streams and ecosystems health assessment methodology to the Arroyo Colorado to further develop a methodology for assessing tidally influenced bodies of water. The methodology will be applied to the Arroyo Colorado as it represents a truly “impacted” body of water. This will serve as the reference endpoint for a degraded system. Three fixed sampling stations will be selected ranging from an upper tidal reach, one middle tidal reach, and one lower tidal reach. Sampling sites will be selected according to salinity tolerant vegetation in each reach.

CMP Funded: **\$107,283**

Match: **\$76,582**

Total Project: **\$183,865**

Contact: **Mr. Troy Berthold**
1500 Research Parkway A240
College Station, Texas 77845
979.845.2028

Cascade Park Coastal Wetlands Enhancement and Education

Cameron County Drainage District #1 will construct ADA-accessible trails and viewing piers for public access and install educational signage. A 17,500-square-foot pervious surface parking lot will also be constructed to include 2,500 square feet of bioretention areas with native vegetation. The parking lot will provide on-site runoff percolation and filter water into wetlands for further decontamination. The wetlands will function as detention ponds during high-flood events through water control structures that allow for fixed water levels.

CMP Funded: **\$100,000**
Match: **\$71,053**
Total Project: **\$171,053**
Contact: **Ms. Patty Alexander**
3510 Old Port Isabel Rd.
Brownsville, Texas 78526
956.551.5009

Derry Waterfront Park Living Shoreline

The City of Port Isabel will create a waterfront park along the Laguna Madre Bay to promote public access and ecotourism. The city will construct two recreational access points as well as a low-crested breakwater to protect an intertidal area planted with native low marsh vegetation.

CMP Funded: **\$219,715**
Match: **\$504,808**
Total Project: **\$724,523**
Contact: **Mr. Edward Meza**
City of Port Isabel
305 E. Maxan Street
Port Isabel, Texas 78578
956.943.2682 Ext. 0706

Jaime J. Zapata Memorial Boat Ramp Fishing Pier & Kayak Launching Area

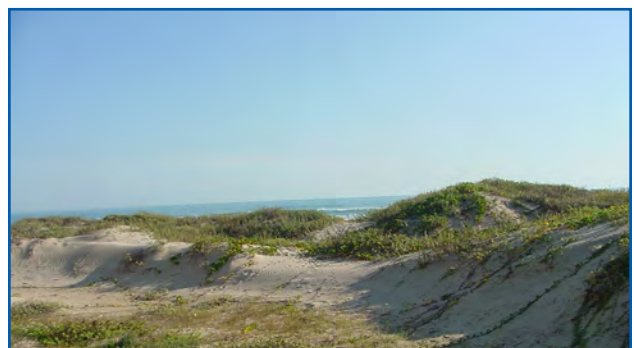
The Cameron County Parks & Recreation Department will make enhancements to public access at the Jaime J. Zapata Memorial Boat Ramp facility. Improvements include the construction of a 55-foot by 10-foot lighted fishing pier and a 20-foot by 6-foot permanent kayak launching area.

CMP Funded: **\$74,930**
Match: **\$49,953**
Total Project: **\$124,883**
Contact: **Mr. Joe Vega**
33174 Park Road 100-South
South Padre Island, Texas 78597
956.761.3700

South Padre Island Dune Restoration Volunteer Program

The City of South Padre Island will conduct dune restoration projects at identified low lying areas and dune gaps along the entire length of the city's beach. The dunes will be restored to form a continuous dune line that is 12 feet above sea level and 125 feet in width. Aerial photography will be used to identify gaps and low lying areas in the dune line.

CMP Funded: **\$87,950**
Match: **\$58,716**
Total Project: **\$146,666**
Contact: **Mr. Reuben Trevino**
4601 Padre Blvd.
South Padre Island, Texas 78566
956.761.3035



Coastwide

Texas High School Coastal Monitoring Program

The University of Texas at Austin Bureau of Economic Geology (BEG) will engage students and teachers living along the Texas coast in the study of their natural environment. Middle and high school students, teachers, and scientists will work together to gain a better understanding of dune and beach dynamics. Students and teachers will learn how to measure the topography, recognize and map the vegetation line and shoreline, and observe weather and wave conditions.

CMP Funded: **\$74,772**

Match: **\$51,515**

Total Project: **\$126,287**

Contact: **Ms. Tiffany Caudle**
University Station, Box X
Austin, Texas 78713
512.475.95727



Galveston County

Bay Day: A Day of Education about Galveston Bay and Coastal Resources

GBF will host a one-day celebration to provide area residents exposure to Galveston Bay. Bay Day highlights hands-on, interactive exhibits, activities and demonstrations that emphasize the multiple uses of the Galveston Bay system. Public awareness of the bay's value, resources, and diversity of uses is increased through fun activities for all ages.

CMP Funded: **\$18,000**

Match: **\$12,000**

Total Project: **\$30,000**

Contact: **Ms. Julie Mintzer**
17330 Highway 3
Webster, TX 77598
281.332.3381

Assessment of E. Coli Pollution from Failing On-Site Sewage Facilities to Galveston Bay

Texas AgriLife Research will assess the water quality impact of failing on-site sewage facilities (OSSFs) in the Dickinson Bayou watershed. A water monitoring program will be used to assess the transport of Escherichia coli (E. coli) from OSSFs in the Dickinson Bayou watershed to surface waters that drain into Galveston Bay.

CMP Funded: **\$99,710**

Match: **\$66,447**

Total Project: **\$166,157**

Contact: **Dr. Clyde Munster**
Department of Biological
and Agricultural Engineering
2117 TAMU
College Station, Texas 77843
979.847.8793

Galveston Bay Oyster Shell Recycling Program: Reclaiming the Resource

GBF will expand its Oyster Shell Recycling Program to include additional restaurants throughout the Houston-Galveston area. A shell recycling route will be established based on the participating restaurants, with a goal of 6-10 restaurants for this stage of the program. Shells obtained from GBF's Oyster Shell Recycling Program will be used for future projects that benefit ecosystem services of Galveston Bay and the health and sustainability of the native oyster population.

CMP Funded: **\$60,000**

Match: **\$40,000**

Total Project: **\$100,000**

Contact:**Mr. Phillip Smith**

17330 Highway 3
 Webster, Texas 77598
281.332.3381 x 210

Boater Waste Education Campaign: Educating Boaters and the Community about Water Quality

GBF will continue its outreach efforts, but more importantly, continue to evolve and expand the campaign based on lessons learned. Through project expansions, GBF will develop partnerships with marinas to implement personalized outreach and management strategies that fit their unique needs; establish a network of volunteer water quality monitors through the Texas Stream Team program in order to measure positive environmental impacts from best management practices implemented; work with enforcement agencies to develop and facilitate No Dumping Zone (NDZ) enforcement training sessions; seek stakeholder support and funding to install city-owned, public pump-out stations in key locations; and work with government officials to establish legislation that designates Galveston Bay as an NDZ.

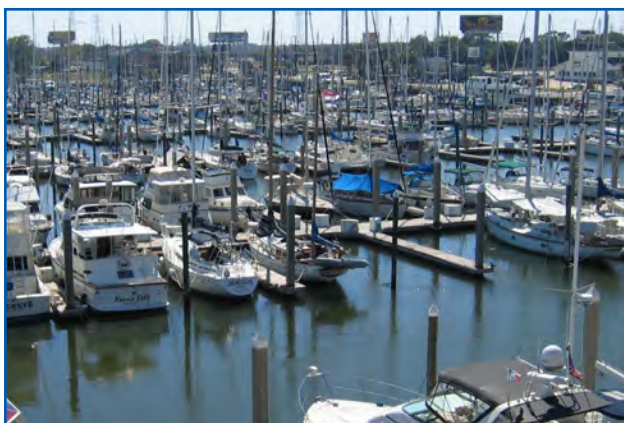
CMP Funded: **\$60,000**

Match: **\$40,000**

Total Project: **\$100,000**

Contact:**Ms. Charlene Bohanon**

17330 Highway 3
 Webster, Texas 77598
281.332.3381



Science-based Monitoring of Created Wetlands and Restored Habitat within the Galveston Bay System

The University of Houston-Clear Lake, in partnership with Lee College, will employ students to conduct research to monitor multiple habitat restoration sites within the Galveston Bay system. This project will provide important information regarding the vegetation and faunal uses of specific created marshes within the Pierce Marsh Complex in lower Galveston Bay. Research will address: methods and techniques of restoration in terms of habitat function and value (plant community, benthic community, and characteristic microfauna); functional pre-Hurricane Ike versus post-Hurricane Ike data; and comparisons of restoration sites to natural reference sites.

CMP Funded: **\$79,116**

Match: **\$55,376**

Total Project: **\$134,492**

Contact:**Dr. Cynthia Howard**

2700 Bay Area Boulevard
 Houston, Texas 77058
281.283.3745

Residential Storm Surge Damage Assessment for Galveston County

Rice University will create an accessible, flexible and updatable GIS database and web-based graphical user interface that elected officials, emergency management officials, and the general public can use for

predictive analysis and decision making. This decision support tool will allow spatial analysis of separate data sets, including storm surge hazard areas, ground elevations, and residential structure location and value from a seamless damage assessment model at the level of individual structures. This research will result in a model that can be queried to estimate total expected flood damage given a user input storm surge elevation.

CMP Funded: **\$100,001**
Match: **\$67,000**
Total Project: **\$167,001**
Contact: **Mr. Garrett Dolan**
6100 Main Street, MS 317
Houston, Texas 77005
713.348.4257

Harris County

Tabbs Bay

The City of Baytown will improve shoreline access, benefit and enhance public utilization, and aid eco-tourism development by removing additional submerged and partially submerged pilings from derelict drilling rigs, defunct derrick platforms, and damaged service docks/piers from Tabbs Bay.

CMP Funded: **\$81,000**
Match: **\$54,000**
Total Project: **\$135,000**
Contact: **Mr. Scott Johnson**
2401 Market Street
Baytown, Texas 77520
281.420.6599

Lower Coast

Acquiring Nearshore Bathymetric and Topographic Elevation Data as well as Aerial Imagery of the Texas South Padre Island

The BEG will acquire highly accurate and spatially dense bathymetric and topographic elevation data as well as Red-Green-Blue aerial imagery of South Padre Island (Port Mansfield to Rio Grande River) to evaluate

detailed nearshore beach-dune sediment budget, position and change rates of the shoreline, vegetation line, and dune line, as well as geomorphic units.

CMP Funded: **\$94,992**
Match: **\$64,735**
Total Project: **\$159,727**
Contact: **Dr. Sojan Mathew**
University Station, Box X
Austin, Texas 78713
512.475.9507

Assessment of Mercury in Selected Game Fish Food Webs in the Texas Coastal Zone

The Texas A&M University-Corpus Christi (TAMUCC) Center for Coastal Studies will expand knowledge of methylmercury movement through aquatic food webs in Lavaca Bay, San Antonio Bay, and Nueces Bay to improve management of this pollutant in the Texas coastal zone.

CMP Funded: **\$47,897**
Match: **\$31,953**
Total Project: **\$79,850**
Contact: **Mr. James Simons**
Natural Resources Center
6300 Ocean Drive, Ste. 3200,
Corpus Christi, Texas 78412
361.825.3223



Nueces County

Public Access and Environmental Enhancements at the Hans and Pat Suter Wildlife Refuge Phase II

CBBEP will design and install a freshwater inflow management structure upstream from the discharge pipeline and implement earth-moving activities as needed to maximize the retention of freshwater inflows in the Nueces Delta.

CMP Funded:	\$100,000
Match:	\$66,667
Total Project:	\$166,667
Contact:	Mr. Michael Morris 1201 Leopard Street Corpus Christi, Texas 78401 361.826.3464

Seagrass and Epiphyte Hyperspectral Imaging for Efficient Integrated Measurement of Water Quality

TAMUCC will improve the water quality monitoring methodology of seagrass-dominated ecosystems by developing an easy-to-implement and data-rich imaging-based technology, which is time and cost efficient, for processing large numbers of samples.

CMP Funded:	\$60,604
Match:	\$40,568
Total Project:	\$101,172

Contact:

Dr. Mehrube Mehrubeoglu
6300 Ocean Dr., Unit 5797
Corpus Christi, Texas 78412
361.825-3378

Shell Bank: An Oyster Shell Recycling, Habitat Selection, and Outreach Program for the Texas Coastal Bend

TAMUCC will expand the oyster shell recycling program, offer increased opportunities for community involvement, create an “Oysters in the classroom” program, and examine alternative reef building materials.

CMP Funded:	\$99,825
Match:	\$66,665
Total Project:	\$166,490
Contact:	Dr. Jennifer Pollack 6300 Ocean Drive, Unit 5800 Corpus Christi, Texas 78412 361.825-2041

Upper Oso Watershed Water Quality Improvement and Habitat Education Project

Nueces County will construct a wetland/stormwater detention pond to filter and clean runoff from agricultural land and parking areas prior to entering the watershed. An ADA accessible wetland overlook will be constructed and benches and interpretive signage will be installed to educate the public about the wetland's impact on the Oso Creek Watershed.



CMP Funded: **\$60,000**
Match: **\$40,000**
Total Project: **\$100,000**
Contact: **Ms. Roxana Hunt**
901 Leopard Street, Room 501
Corpus Christi, Texas 78401
361.888.0225

***Evaluation of Factors Contributing to Water
Quality Degradation in an Urbanizing Estuary
(Oso Bay, Texas)***

TAMUCC will address a series of objectives to enhance understanding of eutrophication dynamics in Oso Bay. These include: 1) quantification of the spatial-temporal

distribution of nutrients and organic matter, 2) development of nutrient and organic matter budgets (i.e., inputs-outputs), 3) quantification of important indicators of eutrophication, and 4) determination of the influence of various land uses on eutrophication in Oso Bay.

CMP Funded: **\$71,210**
Match: **\$50,729**
Total Project: **\$121,939**
Contact: **Dr. Michael Wetz**
6300 Ocean Dr., Unit 5892
Corpus Christi, Texas 78412
361.825.2132

Breakdown of Recommended Projects by County

	# Received	# Funded	\$ Funded	% \$ Funded
Aransas	3	0	0	0
Brazoria	2	1	34,995	2
Calhoun	0	0	0	0
Cameron	9	5	589,878	34
Chambers	0	0	0	0
Galveston	8	6	416,827	24
Harris	1	1	81,000	5
Jackson	0	0	0	0
Jefferson	0	0	0	0
Kenedy	0	0	0	0
Kleberg	1	0	0	0
Matagorda	0	0	0	0
Nueces	9	5	391,639	23
Orange	0	0	0	0
Refugio	0	0	0	0
San Patricio	1	0	0	0
Victoria	0	0	0	0
Willacy	0	0	0	0
Coastwide	3	1	74,771	4
Lower Coast	5	2	142,890	8
Upper Coast	6	0	0	0
TOTAL	48	21	1,732,000	100

Breakdown of Recommended Projects by Funding Category

	Funded	\$ Funded	% \$ Funded
Coastal Natural Hazards Response	8	778,377	45
Critical Areas Enhancement	5	434,174	25
Public Access	3	209,925	12
Water Sediment Quantity and Quality Improvements	4	291,524	17
Waterfront Revitalization and Ecotourism Development	1	18,000	1
Permit Streamlining, Assistance, Government Coordination & Local Government Planning Assistance	0	0	0
Total	21	1,732,000	100

Breakdown of Recommended Projects by Entity

	Funded	\$ Funded	% \$ Funded
Local Governments	8	758,590	44
Special Districts	0	0	0
Nonprofits	3	138,000	8
Universities	10	835,410	48
State Agencies	0	0	0
Regional Governments	0	0	0
Total	21	1,732,000	100

Section 309 Enhancement Grants – Year One of Coastal and Marine Spatial Planning

Section 309 of the CZMA allocates funds to encourage states to develop projects that will affect program enhancements in one or more of the following nine enhancement areas:

- Wetlands
- Public access
- Coastal hazards
- Cumulative and secondary impacts
- Energy and government facility siting
- Marine debris
- Ocean resources
- Special area management plans¹
- Aquaculture

As a condition of receiving grant funds under §309, the CMP must submit a §309 Assessment and Strategies Report to NOAA every five years. The report presents an assessment of each enhancement area, identifies priorities and outlines how the CMP plans to use the funds to address those priorities over the subsequent five years.

In 2011, the Council approved the coastal and marine spatial planning (CMSP) project outlined in the CMP Section 309 Assessment and Strategies Report for 2011-



2015. The CMSP project addresses seven enhancement areas: wetlands, public access, coastal hazards, cumulative and secondary impacts, energy and government facility siting, marine debris and ocean resources. Funding for the second year of the project, FY 2012, totals \$482,400. For more information contact Sheri Land, Director, Coastal Resources at 512.463.5058

1 Special area management plans are prohibited by Texas state law.

A Vision for Our Texas Coast: Framework Development for Coastwide Planning

While planning and mapping of coastal areas for a variety of purposes have been conducted in Texas, a more integrated and comprehensive approach to planning, managing and preventing conflict within the state's coastal and marine areas is needed. This approach can be achieved through the state's engagement in comprehensive long-term planning for the Texas coast, which would serve as an integrated framework for coastal management. Rather than focusing on individual coastal sectors and projects, a spatial planning process would be used to integrate information and bring stakeholders together to identify goals and objectives. The coastwide spatial planning framework will also guide state policy-makers to achieve a sustainable balance among ecological, social, economic and governance objectives; create greater certainty and less risk for users; and streamline permitting and regulation. The program's funding will help with: a comprehensive review of available data and information resources needed for spatial planning; collaboration with stakeholder groups and the public throughout the planning process to ensure coordination; and development of a spatial database and spatial modeling tools for visualization and interpretation of data for coastal resource management decisions.

In September 2012, the GLO hosted Technical Advisory Committee (TAC) meetings in the four coastal regions to identify the critical areas and needs of the Tex-

as coast. The information collected at the TAC meetings will be the basis for a “snapshot” report that will be used to inform the 83rd Texas Legislature of the coastal priorities for each of the four regions, and to serve as a baseline for the long-term planning process.

CMP Funded:	\$482,400
Total Project:	\$482,400

Contact:

Kate Zultner
P.O. Box 12873
Austin, Texas 78711-2873
512.936.9581

**Section 310 Coastal Nonpoint Source
Pollution Control Grants**

FY 2012 funds were not received.



Appendix A

Performance Measures/Contextual Indicators

State of Texas

October 1, 2011 to September 30, 2012

Category	Performance Measure	Units
Government Coordination and Decision Making	Total number of federal consistency projects technically reviewed (determined to be applicable for federal consistency review) during the reporting period.	344
	Number of federal agency activity projects reviewed where the project was modified due to consultation with the applicant to meet state CZM policies.	0
	Number of federal license or permit activity projects reviewed where the project was modified due to consultation with the applicant to meet state CZM policies.	155
	Number of Outer Continental Shelf (OCS) projects reviewed where the project was modified due to consultation with the applicant to meet state CZM policies.	0
	Number of projects for federal financial assistance to state agencies or local governments reviewed where the project was modified due to consultation with the applicant to meet state CZM policies.	0
	Number of acres of permit-estimated loss of tidal (or Great Lake) wetlands due to activities subject to CZM regulatory programs.	174.92

State of Texas

October 1, 2011 to September 30, 2012

Category	Performance Measure	Units
	Number of acres of required gain or mitigation of tidal (or Great Lake) wetlands due to activities subject to CZM regulatory programs.	9.5
	Number of acres of permit-estimated loss of beach and dune habitat due to activities subject to CZM regulatory programs.	2.5
	Number of acres of required gain or mitigation of beach and dune habitat due to activities subject to CZM regulatory programs.	16.32
	Number of acres of permit-estimated loss of nearshore habitat (intertidal, subtidal, submerged) due to activities subject to CZM regulatory programs.	2,685
	Number of acres of required gain or mitigation of nearshore habitat (intertidal, subtidal, submerged) due to activities subject to CZM regulatory programs.	751.47
	Number of acres of permit-estimated loss of other habitat types due to activities subject to CZM regulatory programs.	54.38
	Number of acres of required gain or mitigation of other habitat types due to activities subject to CZM regulatory programs.	74.73
	Number of coordination events related to Government Coordination offered by the CZM Program.	6
	Number of stakeholder groups participating in coordination events related to Government Coordination offered by the CZM Program.	82
	Number of coordination events related to Public Access offered by the CZM Program.	0
	Number of stakeholder groups participating in coordination events related to Public Access offered by the CZM Program.	0

State of Texas

October 1, 2011 to September 30, 2012

Category	Performance Measure	Units
	Number of coordination events related to Coastal Habitat offered by the CZM Program.	0
	Number of stakeholder groups participating in coordination events related to Coastal Habitat offered by the CZM Program.	0
	Number of coordination events related to Coastal Hazards offered by the CZM Program.	0
	Number of stakeholder groups participating in coordination events related to Coastal Hazards offered by the CZM Program.	0
	Number of coordination events related to Coastal Community Development and Coastal Dependent Uses offered by the CZM Program.	2
	Number of stakeholder groups participating in coordination events related to Coastal Community Development and Coastal Dependent Uses offered by the CZM Program.	17
	Number of educational activities related to Government Coordination offered by the CZM Program.	17
	Number of participants in educational activities related to Government Coordination offered by the CZM program.	608
	Number of training events related to Government Coordination offered by the CZM Program.	3
	Number of participants in training events related to Government Coordination offered by the CZM Program.	38
Public Access	Number of public access sites created through acquisition or easement with assistance from CZM funding or staff.	2
	Number of existing public access sites enhanced with assistance from CZM funding or staff.	6

State of Texas

October 1, 2011 to September 30, 2012

Category	Performance Measure	Units
	Number of public access sites created through CZM regulatory requirements.	0
	Number of public access sites enhanced through CZM regulatory requirements.	8
	Number of educational activities related to Public Access offered by the CZM Program.	7
	Number of participants in educational activities related to Public Access offered by the CZM Program.	319
	Number of training events related to Public Access offered by the CZM Program.	0
	Number of participants in training events related to Public Access offered by the CZM Program.	0
Coastal Habitat	Number of acres of tidal or Great Lake wetlands protected by acquisition or easement with assistance from CZM funding or staff.	0
	Number of acres of tidal or Great Lake wetlands under restoration with assistance from CZM funding or staff.	168.8
	Number of acres of beach and dune habitat protected by acquisition or easement with assistance from CZM funding or staff.	0
	Number of acres of beach and dune habitat under restoration with or easement with assistance from CZM funding or staff.	0
	Number of acres of nearshore habitat (intertidal, subtidal, and submerged) protected by acquisition or easement with assistance from CZM funding or staff.	0
	Number of acres of nearshore habitat (intertidal, subtidal, and submerged) under restoration with assistance from CZM funding or staff.	0

State of Texas

October 1, 2011 to September 30, 2012

Category	Performance Measure	Units
	Number of acres of other types of habitat protected by acquisition or easement with assistance from CZM funding or staff.	1.65
	Number of acres of other types of habitat under restoration with assistance from CZM funding or staff.	0
	Number of meters of beach and dune habitat protected by acquisition or easement with assistance from CZM funding or staff.	0
	Number of meters of beach and dune habitat under restoration with assistance from CZM funding or staff.	0
	Number of meters of nearshore habitat (intertidal, subtidal, and submerged) protected by acquisition or easement with assistance from CZM funding or staff.	0
	Number of meters of nearshore habitat (intertidal, subtidal, and submerged) under restoration with assistance from CZM funding or staff.	0
	Number of meters of other types of habitat protected by acquisition or easement with assistance from CZM funding or staff.	0
	Number of meters of other types of habitat under restoration with assistance from CZM funding or staff.	0
	Number of marine debris removal activities completed with assistance from CZM funding or staff.	13
	Estimated number of pounds of debris removed by the above reported marine debris removal activities.	628,365
	Number of educational activities related to Coastal Habitat offered by the CZM Program.	65

State of Texas

October 1, 2011 to September 30, 2012

Category	Performance Measure	Units
	Number of participants in educational activities related to Coastal Habitat offered by the CZM Program.	12,353
	Number of training events related to Coastal Habitat offered by the CZM Program.	6
	Number of participants in training events related to Coastal Habitat offered by the CZM Program.	105
	Number of Communities that completed a project to reduce future damage from hazards with assistance from CZM funding or staff.	2
	Number of communities that completed a project to increase public awareness of hazards with assistance from CZM funding or staff.	18
	Number of educational activities related to Coastal Hazards offered by the CZM Program.	22
	Number of participants in educational activities related to Coastal Hazards offered by the CZM Program.	2,121
	Number of training events related to Coastal Hazards offered by the CZM Program.	0
	Number of participants in training events related to Coastal Hazards offered by the CZM Program.	0
Coastal Dependent Uses & Community Development	Number of coastal communities that developed or updated sustainable development ordinances, policies, and plans with assistance from CZM funding or staff.	4
	Number of coastal communities that completed a project to implement a sustainable development plan with assistance from CZM funding or staff.	1

State of Texas

October 1, 2011 to September 30, 2012

Category	Performance Measure	Units
	Number of coastal communities that developed or updated port or waterfront redevelopment ordinances, policies, and plans with assistance from CZM funding or staff.	1
	Number of coastal communities that completed a project to implement a port or waterfront redevelopment plan with assistance from CZM funding or staff.	1
	Number of coastal communities that developed or updated polluted runoff management ordinances, policies, and plans with assistance from CZM funding or staff.	1
	Number of coastal communities that completed projects to implement polluted runoff management plans with assistance from CZM funding or staff.	1
	Number of educational activities related to Coastal Dependent Uses and Community Development offered by the CZM Program.	44
	Number of participants in educational activities related to Coastal Dependent Uses and Community Development offered by the CZM Program.	31,517
	Number of training events related to Coastal Dependent Uses and Community Development offered by the CZM Program.	0
	Number of participants in training events related to Coastal Dependent Uses and Community Development offered by the CZM Program.	0
Financial Measures	Number of CZM federal and matching dollars spent on Government Coordination.	\$228,968
	Number of CZM federal and matching dollars spent on Public Access.	\$635,591
	Number of CZM federal and matching dollars spent on Coastal Habitat.	\$2,102,415

State of Texas

October 1, 2011 to September 30, 2012

Category	Performance Measure	Units
	Number of CZM federal and matching dollars spent on Coastal Hazards.	\$636,740
	Number of CZM federal and matching dollars spent on Coastal Dependent Uses and Community Development.	\$236,922
	Number of dollars leveraged by CZM funds for Government Coordination.	\$0
	Number of dollars leveraged by CZM funds for Public Access.	\$326
	Number of dollars leveraged by CZM funds for Coastal Habitat Activities.	\$176,416
	Number of dollars leveraged by CZM funds for Coastal Hazards.	\$0
	Number of dollars leveraged by CZM funds for Coastal Dependent Uses and Community Development.	\$123,384
	Number of CZM federal and matching dollars spent on technical assistance to local governments for Government Coordination.	\$1,359,550
	Number of CZM federal and matching dollars spent on technical assistance to local governments for Public Access.	\$0
	Number of CZM federal and matching dollars spent on technical assistance to local governments for Coastal Habitat.	\$0
	Number of CZM federal and matching dollars spent on technical assistance to local governments for Coastal Hazards	\$0
	Number of CZM federal and matching dollars spent on technical assistance to local governments for Coastal Dependent Uses and Community Development.	\$0
	Number of CZM federal and matching dollars provided as financial assistance to local governments for Government Coordination.	\$0

State of Texas
October 1, 2011 to September 30, 2012

Category	Performance Measure	Units
	Number of CZM federal and matching dollars provided as financial assistance to local governments for Public Access.	\$0
	Number of CZM federal and matching dollars provided as financial assistance to local governments for Coastal Habitat.	\$0
	Number of CZM federal and matching dollars provided as financial assistance to local governments for Coastal Hazards.	\$0
	Number of CZM federal and matching dollars provided as financial assistance to local governments for Coastal Dependent Uses and Community Development.	\$40,955



Appendix B

Publications

Since the inception of the Texas Coastal Management Program various publications have been created and distributed to fulfill the CMP goal of educating the public about the principal coastal problems of state concern and technology available for the protection and improved management of the CNRAs. Publications are evaluated on a regular basis to determine gaps in needed materials, to provide updates on already available publications, and to reflect current areas of focus on the coast. Publications listed below reflect those that were created over the last year as well as those that are considered current publications and are distributed to the public. Past publications can be found on our website at www.TexasCoastalConnection.com.

Newsletters

“On the Coast” Newsletter: Spring 2011: A publication distributed to the public covering current coastal news in Texas.

Reports

Texas Coastal Management Program Annual Report: 2011 Annual Report: An annual report published by the Coastal Coordination Advisory Committee for the Legislature that includes yearly program initiatives, updates on the total number of consistency reviews conducted and PSC activities. Demographics on the Texas coast are provided in the report on a biennial schedule.

Coastal Erosion Planning and Response Act (CEPRA): Report to the 82nd Texas Legislature, April 2011: A biennial report to the Legislature that provides the information specified by CEPRA (Natural Resources Code §33.608) and highlights both the progress and the challenges of the CEPRA program over the first five biennial cycles of its implementation.

Guidebooks, Manuals, Brochures, etc.

Beach Watch: August 2011. An informational brochure describing the Beach Watch program and how to access the website to check on the water quality of beaches.

Texas Aquaculture: A Regulatory Guide: August 2009. A regulatory guide on aquaculture and the authority and role the different state agencies have in the industry.

Coastal Permitting Assistance for Individuals and Small Businesses Brochure: Summer 2006. A brochure that explains the functions of the PSC including contact information for each location and information on who is eligible for these services.

Coastal Dune Protection & Improvement Manual: August 2005. An informational manual on the importance of sand dunes and methods used for protecting and restoring these natural features.

Texas Beach and Bay Access Guidebook, Second Edition: August 2003. This guide is designed to help the user locate a variety of public access sites, National Wildlife Refuges, and Wildlife Management Areas along the Texas coast.

“Caring for the Coast,” Coastal Resources Brochure: May 2009. This brochure provides an overview of the GLO’s duties and role as steward of the Texas coast.

Texas Beach Accessibility Guide: March 2011. A guidebook describing accessible parking and physical access to Texas beaches.

Posters, Bookmarks, Bumper Stickers, etc.

Poster: Texas Beach & Dune

Poster: Marine Debris

Poster: Texas Coastal Treasures

Poster: Texas Coastal Wetlands

Poster: Texas Submerged Lands

Texas Coastal Natural Resource Area Bookmarks

“Protect Our Beaches and Dunes” Bumper sticker

Aerial Photography

<http://www.glo.texas.gov/GLO/agency-administration/gis/index.html>

Geographic Information System (GIS) Data

<http://www.glo.texas.gov/GLO/agency-administration/gis/gis-data.html>

For more information or to request a publication, call 800.998.4GLO (select option 6), fax 512.475.0680, e-mail coastpublications@glo.texas.gov, or write to the General Land Office, Coastal Resources Division, P.O. Box 12873, Austin, Texas 78711-2873.



Severance v. Patterson, 370 S.W.3d 705 (Tex. 2012).

In 2005, Carol Severance, a California resident, purchased three houses in Galveston located on the public beach. A year later, she filed a federal lawsuit against the GLO, claiming that the possible removal of her houses pursuant to the Texas Open Beaches Act (OBA) violated her Fourth and Fifth Amendment rights under the U.S. Constitution. In particular, Severance argued that enforcing the public's beach access easement would constitute an "unreasonable seizure" of her property and a taking without just compensation. The district court dismissed her case, and Severance appealed the dismissal to the U.S. Court of Appeals for the Fifth Circuit.

In a 2-1 decision, the Fifth Circuit affirmed the dismissal of Severance's takings claim but found her "unreasonable seizure" claim to be ripe and certified three questions of state law regarding "rolling easements" to the Texas Supreme Court. In early 2012, the Texas Supreme Court issued a 5-3 decision following rehearing. The court held that public beach access easements "roll" landward with gradual and imperceptible erosion of the shoreline. However, the court also held that public easements do not automatically roll inland as the result of an "avulsive" event, such as a hurricane, that "suddenly and dramatically" pushes the line of vegetation landward.

Having received the answers to the certified questions, the Fifth Circuit stated that Severance had a potential "unreasonable seizure" claim in light of the Texas Supreme Court's declaration that Texas law does not recognize a "rolling easement" created by avulsive events affecting the dry beach of Galveston's West Beach. Accordingly, the Fifth Circuit remanded the case to federal district court, where the case originated, for further proceedings in connection with Severance's Fourth Amendment claim. The district court has not yet entered a scheduling order.

Brannan v. State, 365 S.W.3d 1 (Tex. App.—Houston [1st Dist.] 2010, pet. filed). Following Tropical Storm Frances in 1998, several houses in the Village of Surfside Beach encroached on the public beach. In some instances, permits and utility service to houses located on the public beach were denied or ignored. In 2001, a number of homeowners filed suit against the state and the village for the right to repair their houses, for the loss of use of their properties, and for damages. The state filed a counter-claim, seeking removal of the houses under the OBA.

On motions for partial summary judgment, the trial court ruled that the removal of houses in question were not takings of property and that the plaintiffs were not entitled to compensation. Pursuant to a provision in the OBA, the GLO then delayed removal efforts for two

years. In 2007, on final summary judgment, the trial court ruled for the state and issued an injunction for removal of the houses from the public beach easement. The plaintiffs appealed the decision and the injunction was suspended pending the outcome of the appeal. In 2008, a tidal surge from Hurricane Ike destroyed 10 of the 14 houses at issue in the case, and one of the remaining houses collapsed later.

In 2010, the First Court of Appeals issued an opinion on rehearing affirming the trial court. The appellate court held that the trial court had correctly decided the case in ordering the removal of the houses on the public beach, in determining that the plaintiffs had not suffered physical or regulatory takings, and in denying damages. The plaintiffs filed a petition for review with the Texas Supreme Court.

The Texas Supreme Court requested briefing on the merits, which was completed in early 2011. The court has not yet decided whether or not to hear the case.

Texas Gen. Land Office v. Porretto, 369 S.W.2d 276 (Tex. App.—Houston [1st Dist.] 2011, pet. filed). In 2001, the Porretto family tried to sell land in front of the seawall in Galveston. When the deal fell through, the Porrettos filed suit against the state, alleging a governmental taking of their beachfront property and a cloud on their title to such property.

At trial, the state did not dispute the Porrettos' assertion that they owned property landward of the mean higher high tide line, which is the line that would constitute the public-private boundary under applicable Spanish civil law. But the state contested, as it must, the Porrettos' assertion that they held title to the state-owned submerged lands included in the unsuccessful

sale. Nonetheless, the trial court ruled in favor of the Porrettos and declared that they held title to the property in question. The trial court also ruled that the OBA was unconstitutional and imposed discovery sanctions against the state. The state appealed the trial court's judgment.

In 2011, the First Court of Appeals reversed the trial court on all points and rendered judgment in favor of the state. In its opinion, the appellate court reasoned that the Porrettos' takings claims were without merit because the state had proven ownership of the submerged lands the Porrettos had tried to sell. The court concluded that the state actions with respect to land above the mean higher high tide line could not be considered unconstitutional takings either. As to the Porrettos' OBA claims, the court held that the Porrettos had not identified any property right threatened by application of the OBA and therefore any challenges to the OBA failed for lack of subject matter jurisdiction. Accordingly, the appellate court dismissed the case for lack of jurisdiction and rendered judgment that the Porrettos take nothing on their inverse condemnation (i.e., unconstitutional takings) claims.

The Porrettos filed a petition for review with the Texas Supreme Court in July 2012. For the purposes of the petition for review, appellant Sonya Porretto, who filed for bankruptcy in 2009, has been substituted as a party with the Chapter 7 Trustee appointed to her bankruptcy case. Following the filing of the petition for review, the state filed its response and the Porrettos filed a reply.

Recently, the Texas Supreme Court requested briefing on the merits. The Porrettos' brief is due in mid-December 2012, and the state's response brief is due in January 2013.

Appendix D

Coastal Demographics

Water Usage/Projections

County	Municipal	Manuf.	Mining	Steam Electric	Livestock	Irrigation	Total
Upper Coast							
Brazoria							
2020	53,523	286,554	981	155	1,650	77,121	419,984
2030	59,656	309,841	1,184	181	1,650	74,258	446,770
2040	65,134	333,348	1,380	213	1,650	72,532	444,257
2050	71,567	354,093	1,599	252	1,650	72,532	501,693
2060	78,898	379,241	1,833	300	1,650	72,532	534,454
Chambers							
2020	5,854	11,043	9	3,536	554	55,059	76,055
2030	6,648	11,919	9	4,134	554	55,059	78,393
2040	7,338	12,792	9	4,863	554	55,059	80,615
2050	8,067	13,577	9	5,751	554	55,059	83,059
2060	8,863	14,591	9	6,834	554	55,059	85,910
Galveston							
2020	47,390	84,870	381	4,013	254	3,565	140,473
2030	47,818	90,070	407	4,692	254	3,565	146,806
2040	47,487	95,136	450	5,519	254	3,565	152,411
2050	47,393	99,492	486	6,528	254	3,565	157,718
2060	47,641	106,239	519	7,757	254	3,565	165,975
Harris							
2020	789,397	424,761	3,273	23,556	1,667	3,397	1,246,051
2030	868,320	449,218	3,252	27,540	1,667	3,397	1,353,394
2040	948,412	470,881	3,194	32,396	1,667	3,397	1,459,947
2050	1,030,899	487,094	3,160	38,316	1,667	3,397	1,564,533
2060	1,119,593	478,957	3,133	45,532	1,667	3,397	1,652,279

Water Usage/Projections

County	Municipal	Manuf.	Mining	Steam Electric	Livestock	Irrigation	Total
Jefferson							
2020	50,445	423,258	194	13,426	946	82,814	571,083
2030	50,617	603,321	216	15,696	946	82,814	753,610
2040	50,565	629,171	243	18,464	946	82,814	782,203
2050	50,865	655,034	294	21,838	946	82,814	811,791
2060	52,359	680,914	328	25,951	946	82,814	843,312
Orange							
2020	12,792	64,461	309	4,966	209	0	82,737
2030	12,622	70,439	314	5,805	209	0	89,389
2040	12,387	76,399	313	6,826	209	0	96,134
2050	12,380	81,690	314	8,077	209	0	102,670
2060							
Middle Coast Calhoun							
2020	3,222	44,284	52	0	344	13,472	61,374
2030	3,556	47,818	54	0	344	11,935	63,707
2040	3,870	51,322	41	0	344	10,894	66,471
2050	4,007	54,415	30	0	344	10,148	68,944
2060	4,171	58,316	19	0	344	9,453	72,303
Matagorda							
2020	5,830	13,253	95	135,500	1,503	117,462	273,643
2030	5,906	13,191	99	135,500	1,503	113,220	269,419
2040	5,883	14,686	75	135,500	1,503	109,157	266,804
2050	5,831	15,259	55	135,500	1,503	105,247	263,395
2060	5,831	16,267	35	135,500	1,503	101,477	260,613
Jackson							
2020	1,953	510	69	0	1,034	38,967	42,533
2030	1,974	525	73	0	1,034	38,967	42,573
2040	1,960	539	55	0	1,034	38,967	42,555
2050	1,955	551	40	0	1,034	38,967	42,547
2060	1,956	586	26	0	1,034	38,967	42,569
Refugio							
2020	1,287	0	65	0	636	652	2,640
2030	1,282	0	68	0	636	652	2,638
2040	1,299	0	51	0	636	652	2,638
2050	1,312	0	38	0	636	52	2,624
2060	1,302	0	24	0	636	652	2,614

Water Usage/Projections

County	Municipal	Manuf.	Mining	Steam Electric	Livestock	Irrigation	Total
Victoria							
2020	15,614	30,977	71	53,178	1,165	3,255	104,260
2030	16,378	33,815	75	53,178	1,165	2,809	107,420
2040	16,884	36,640	56	53,178	1,165	2,424	110,347
2050	17,435	39,165	41	53,178	1,165	2,092	113,067
2060	18,034	42,005	27	53,178	1,165	1,806	116,215
Coastal Bend							
Aransas							
2020	4,263	137	27	0	44	0	4,471
2030	4,444	142	28	0	44	0	4,658
2040	4,326	147	21	0	44	0	4,538
2050	4,053	151	16	0	44	0	4,264
2060	3,835	161	10	0	44	0	4,050
Kleberg							
2020	6,436	0	356	0	1,276	0	8,068
2030	6,664	0	360	0	1,276	0	8,300
2040	6,762	0	340	0	1,276	0	8,378
2050	7,008	0	324	0	1,276	0	8,608
2060	7,020	0	308	0	1,276	0	8,604
Nueces							
2020	78,691	50,276	723	15,038	315	439	145,482
2030	85,697	53,425	853	17,582	315	378	158,250
2040	91,988	56,500	947	20,681	315	326	170,757
2050	97,882	59,150	1,022	24,461	315	281	183,111
2060	103,018	63,313	1,130	29,067	315	243	197,086
San Patricio							
2020	11,423	14,035	372	0	406	11,085	37,321
2030	12,661	15,222	420	0	406	12,244	40,953
2040	13,813	16,394	441	0	406	13,525	44,579
2050	14,997	17,426	460	0	406	14,940	48,229
2060	16,191	18,729	492	0	406	16,504	52,322
Lower Coast							
Cameron							
2020	104,850	4,708	64	1,523	334	295,138	406,617
2030	121,342	5,111	67	1,780	334	275,935	404,569
2040	138,190	5,510	47	2,094	334	275,935	422,110
2050	155,290	5,856	31	2,477	334	275,935	440,842
2060	172,211	6,324	15	2,944	334	275,935	457,763

Water Usage/Projections

County	Municipal	Manuf.	Mining	Steam Electric	Livestock	Irrigation	Total
Kenedy							
2020	52	0	117	0	644	0	813
2030	53	0	122	0	644	0	819
2040	53	0	92	0	644	0	789
2050	52	0	68	0	644	0	764
2060	53	0	43	0	644	0	740
Willacy							
2020	3,527	136	48	0	261	59,193	63,165
2030	3,706	136	50	0	261	59,606	63,759
2040	3,844	136	38	0	261	59,606	63,885
2050	3,966	136	28	0	261	59,606	63,997
2060	4,036	136	18	0	261	59,606	64,057
Source: Texas Water Development Board, 2017 Regional Water Plan, County Water Demand Projections 2020-2070							

Commercial Fisheries Data: Tonnage in Pounds

Port/Year	Rank (by pounds)	Millions of Pounds	Millions of Dollars
Brownsville/ Port Isabel			
2011	34	24.8	58.2
2010	32	22.7	52.5
2009	27	27.0	41.0
2008	24	20.4	49.3
Galveston			
2011	44	18.7	46.9
2010	48	13.4	28.0
2009	33	22.0	35.0
2008	49	13.1	33.0
Palacios			
2011	50	14.9	35.8
2010	47	13.9	31.9
2009	37	20.0	27.0
2008	47	13.6	32.1
Port Arthur			
2011	40	21.3	57.1
2010	37	19.6	47.4
2009	44	16.0	27.0
2008	42	14.9	39.0
Source: National Marine Fisheries Service, Landings by Port Ranked by Pounds.			

County Onshore Oil and Gas Production

County	Oil (BBL)	Casinghead (MCF)	GW Gas (MCF)	Condensate (BBL)
Upper Coast				
Brazoria				
2011	1,389,409	2,120,977	20,140,216	624,232
2010	1,709,268	2,487,189	26,111,418	731,173
2009	1,804,814	1,804,111	25,882,740	578,460
2008	1,969,897	1,914,353	29,802,952	678,470
Chambers				
2011	1,064,074	1,232,031	4,548,382	169,448
2010	1,994,919	1,511,519	8,791,275	211,824
2009	728,946	976,897	8,679,603	235,510
2008	746,990	1,278,551	9,079,676	200,248
Galveston				
2011	530,684	663,346	5,970,221	333,582
2010	547,583	848,338	8,328,118	494,411
2009	468,745	805,175	12,615,334	765,408
2008	538,071	822,365	13,939,075	995,135
Harris				
2011	1,161,900	947,316	19,396,508	326,613
2010	1,178,527	1,120,028	21,577,227	369,712
2009	1,299,548	1,459,848	24,563,077	416,713
2008	1,403,505	989,080	23,360,192	406,721
Jefferson				
2011	828,773	1,536,991	58,404,241	3,522,769
2010	895,823	1,669,920	115,494,525	7,074,385
2009	898,633	1,375,209	70,234,799	3,727,879
2008	906,470	1,539,203	62,163,597	3,227,770
Orange				
2011	849,765	1,797,714	17,957,385	986,633
2010	472,053	1,119,867	11,699,153	746,835
2009	490,128	1,395,208	9,704,499	661,891
2008	513,584	1,038,775	8,306,845	461,848

County Onshore Oil and Gas Production

County	Oil (BBL)	Casinghead (MCF)	GW Gas (MCF)	Condensate (BBL)
Middle Coast				
Calhoun				
2011	149,166	153,013	4,882,697	145,646
2010	166,967	191,612	6,557,183	171,838
2009	161,024	209,550	10,155,055	287,372
2008	224,779	442,672	12,743,334	409,879
Jackson				
2011	663,110	1,036,665	9,098,950	283,509
2010	702,867	1,075,633	13,073,986	319,000
2009	693,219	968,940	17,295,178	478,764
2008	730,381	945,147	17,494,940	494,105
Matagorda				
2011	365,949	1,127,186	24,412,179	576,590
2010	400,786	1,122,291	29,177,065	615,277
2009	329,691	785,161	39,938,097	751,459
2008	347,869	649,560	45,864,372	1,069,000
Refugio				
2011	3,512,195	12,455,662	5,645,660	123,427
2010	3,736,173	16,586,706	7,954,267	180,192
2009	3,508,768	18,201,442	10,136,866	215,729
2008	3,375,232	20,369,341	15,790,864	270,341
Victoria				
2011	564,539	472,486	7,675,935	75,427
2010	617,949	739,523	8,937,017	91,253
2009	640,997	798,278	11,645,878	134,798
2008	728,513	720,007	16,976,321	96,065
Coastal Bend				
Aransas				
2011	96,301	244,636	5,237,123	134,401
2010	50,489	262,295	6,757,353	189,898
2009	67,320	403,860	10,886,434	279,412
2008	83,362	604,576	11,650,062	373,952

County Onshore Oil and Gas Production

County	Oil (BBL)	Casinghead (MCF)	GW Gas (MCF)	Condensate (BBL)
Kleberg				
2011	322,539	360,196	18,642,568	124,465
2010	159,181	153,421	17,505,012	174,320
2009	95,705	234,793	24,174,917	239,017
2008	40,110	72,284	37,376,257	487,155
Nueces				
2011	515,863	1,200,578	30,951,967	341,560
2010	496,786	1,292,523	28,501,367	546,480
2009	464,694	1,227,573	28,361,742	497,838
2008	448,977	1,344,532	38,531,400	740,674
San Patricio				
2011	446,361	771,102	11,026,643	381,067
2010	405,413	755,570	17,112,218	647,239
2009	360,357	735,085	26,942,567	947,827
2008	405,020	964,613	18,898,033	691,639
Lower Coast Cameron				
2011	425	3	1,025,290	3,515
2010	610	156	133,086	155
2009	700	78	133,773	1
2008	633	2,072	101,298	97
Kenedy				
2011	51,808	312,847	38,025,194	233,658
2010	72,751	797,426	47,380,132	293,500
2009	54,731	144,842	53,425,801	237,883
2008	60,211	138,943	51,152,035	206,747
Willacy				
2011	338,318	323,092	17,388,729	274,445
2010	339,712	399,276	24,152,092	426,599
2009	35,879	73,357	2,081,251	34,638
2008	392,827	424,772	25,529,550	482,588
Source: Railroad Commission of Texas				

Offshore Oil and Gas Production (by Offshore Block)

Area Totals	Oil (BBL)	Casinghead (MCF)	GW Gas (MCF)	Condensate (BBL)
Brazos				
2011	0	0	1,574,128	772
2010	0	0	3,059,761	2,053
2009	0	0	3,696,170	1,275
2008	0	0	4,646,003	4,633
Galveston				
2011	0	0	3,400,961	245,088
2010	0	0	2,349,564	338,658
2009	0	0	4,762,362	228,192
2008	0	0	7,867,959	82,057
High Island				
2011	180,779	114,901	9,542,184	206,367
2010	225,576	145,548	12,653,133	381,798
2009	225,947	280,696	18,364,892	560,989
2008	101,195	87,005	22,931,661	329,774
Matagorda Island				
2011	325,696	786,918	3,976,595	6,370
2010	234,183	987,331	4,291,396	12,726
2009	232,530	1,357,088	7,209,741	35,858
2008	94,989	0	77,18,439	68,645
Mustang Island				
2011	15,832	23,347	4,788,179	84,832
2010	17,544	27,728	5,384,876	99,908
2009	22,037	35,356	4,750,907	78,976
2008	27,187	43,407	5,575,208	102,996
North Padre Island				
2011	0	0	275,656	8,595
2010	0	0	329,678	14,759
2009	0	0	412,413	12,928
2008	0	0	446,502	13,692
Source: Railroad Commission of Texas				

County Income Per Capita

County	2008	2009	2010	2011
Upper Coast				
Brazoria	36,699	36,355	37,081	36,677
Chambers	43,605	42,035	45,681	48,969
Galveston	40,711	41,654	41,876	43,444
Harris	47,788	43,866	45,991	48,935
Jefferson	36,071	35,006	36,752	38,712
Orange	34,221	34,547	36,328	38,163
Middle Coast				
Calhoun	30,254	29,357	30,964	32,413
Jackson	29,875	28,944	31,178	33,937
Matagorda	28,986	30,336	31,564	33,287
Refugio	34,031	32,177	35,686	39,958
Victoria	37,788	37,719	39,488	42,452
Coastal Bend				
Aransas	36,855	38,439	40,411	42,512
Kleberg	30,714	30,195	31,464	33,734
Nueces	36,318	34,439	36,545	38,441
San Patricio	31,998	33,135	35,885	38,087
Lower Coast				
Cameron	21,387	21,570	22,557	23,236
Kenedy	46,115	37,811	42,945	51,037
Willacy	23,087	22,499	24,900	26,462
Source: Bureau of Economic Analysis (Last updated November 26, 2012)				

County Population/Projections

County	2010 Census	2020 Projection	2030 Projection	2040 Projection
Upper Coast				
Brazoria	313,166	335,893	383,526	–
Chambers	35,096	37,599	43,430	–
Galveston	291,309	286,321	297,335	303,204
Harris	4,092,459	4,530,034	5,161,416	5,842,290
Jefferson	252,273	276,051	290,022	306,637
Orange	81,837	92,239	92,452	90,106
Middle Coast				
Calhoun	21,381	24,427	25,724	26,569
Jackson	14,075	16,745	17,430	17,758
Matagorda	36,702	44,714	47,060	48,652
Refugio	7,383	8,661	8,792	8,784
Victoria	86,793	104,269	112,417	119,336
Coastal Bend				
Aransas	23,158	26,468	27,267	27,338
Kleberg	32,061	41,689	44,507	46,377
Nueces	340,223	394,002	426,926	454,471
San Patricio	64,804	96,483	111,185	124,754
Lower Coast				
Cameron	406,220	499,380	587,063	675,777
Kenedy	416	504	518	513
Willacy	22,134	25,876	28,450	30,512
State Totals	6,121,490	28,005,740	31,830,575	35,761,165
Source: Office of the State Demographer and the Texas State Data Center in the Institute for Demographic and Socioeconomic Research at the University of Texas at San Antonio (February 2009)				

Tonnage for Texas Ports

Port	Rank	Domestic	Foreign	Imports	Exports	Total
Houston						
2010	2	67,572,638	159,560,593	88,507,605	71,052,988	227,133,231
2009	2	63,371,521	147,969,451	84,629,722	63,339,729	211,340,972
2008	2	65,808,295	146,399,626	92,018,956	54,380,670	212,207,921
2007	2	70,721,886	145,342,439	94,691,663	50,650,776	216,064,325
2006	2	69,269,334	152,577,416	106,905,495	45,971,921	222,146,750
Corpus Christi						
2010	6	18,840,615	54,822,817	41,654,989	13,167,828	73,663,432
2009	6	17,435,654	50,508,314	39,673,722	11,130,592	68,239,968
2008	6	21,430,962	55,355,211	43,373,738	11,981,473	76,786,173
2007	6	22,707,247	58,365,262	48,025,392	10,339,870	81,072,509
2006	6	23,799,835	53,757,643	45,327,989	8,429,654	77,557,478
Beaumont						
2010	4	25,176,606	51,781,986	44,309,994	7,471,992	76,958,592
2009	7	67,715,469	24,428,821	43,286,648	36,873,234	6,413,414
2008	7	22,687,915	46,795,624	41,167,853	5,627,771	69,483,539
2007	5	24,339,637	57,043,894	50,456,036	6,587,858	81,383,531
2006	5	22,169,626	57,316,078	57,316,078	5,486,991	79,485,704
Texas City						
2010	10	16,515,074	40,075,782	32,553,419	7,522,363	56,590,856
2009	10	16,156,660	36,475,801	31,701,199	4,774,602	52,632,461
2008	13	13,895,595	38,710,432	33,926,630	4,783,805	52,606,030
2007	13	16,307,273	40,479,252	35,918,567	4,560,685	56,786,525
2006	14	13,087,316	35,788,087	32,534,367	3,253,720	48,875,403
Port Arthur						
2010	25	10,766,872	19,464,914	10,782,699	8,682,215	30,231,786
2009	19	9,418,964	24,385,235	14,440,672	9,944,563	33,804,199
2008	25	10,004,521	21,748,221	14,834,711	6,913,510	31,752,742
2007	28	11,614,436	17,647,165	11,851,472	5,795,693	29,261,601
2006	28	9,516,841	18,885,671	13,015,308	5,870,363	28,402,512
Freeport						
2010	27	4,347,395	22,328,447	20,083,819	2,244,628	26,675,842
2009	27	4,025,067	23,337,698	21,093,998	2,243,700	27,362,765
2008	26	4,135,091	25,707,204	22,971,011	2,736,193	29,842,295
2007	27	5,532,766	24,065,126	20,966,733	3,098,393	29,597,892
2006	25	4,980,514	27,166,065	24,119,149	3,046,916	32,146,579

Tonnage for Texas Ports

Port	Rank	Domestic	Foreign	Imports	Exports	Total
Galveston						
2010	41	5,934,427	8,014,469	1,877,503	6,136,966	13,948,896
2009	47	5,248,200	4,543,707	1,105,885	3,434,877	9,791,907
2008	54	4,199,979	5,581,389	1,825,635	3,755,754	9,781,368
2007	54	4,380,764	5,410,139	1,339,286	4,070,853	9,790,903
2006	55	4,071,780	5,285,470	1,148,661	4,136,809	9,357,250
Brownsville						
2010	78	2,135,268	2,481,224	2,257,293	223,931	4,616,492
2009	72	1,530,570	3,143,759	2,928,230	215,529	4,674,329
2008	76	1,843,662	3,825,783	3,541,172	284,611	5,669,445
2007	79	1,570,179	2,936,027	2,438,710	497,317	4,506,206
2006	77	997,104	4,311,602	3,913,163	398,439	5,308,706
Victoria						
2010	89	2,792,180	-	-	-	2,792,180
2009	105	1,951,820	-	-	-	1,951,820
2008	94	2,861,933	-	-	-	2,861,933
2007	95	3,154,559	-	-	-	3,154,559
2006	96	3,555,869	-	-	-	4,197,166
Source: US Army Corps of Engineers, Waterborne Commerce Statistics Center (2010)						



Texas Coastal Management Program

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A publication of the Texas General Land Office. Funded by a grant from the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) pursuant to award No. NA12NOS4190021.

Photos courtesy of Texas Parks and Wildlife Department, South Padre Island Convention and Visitors Bureau and Vadim Troshkin, Galveston.com.

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